Chapter Six

The Long-Term Budget Outlook

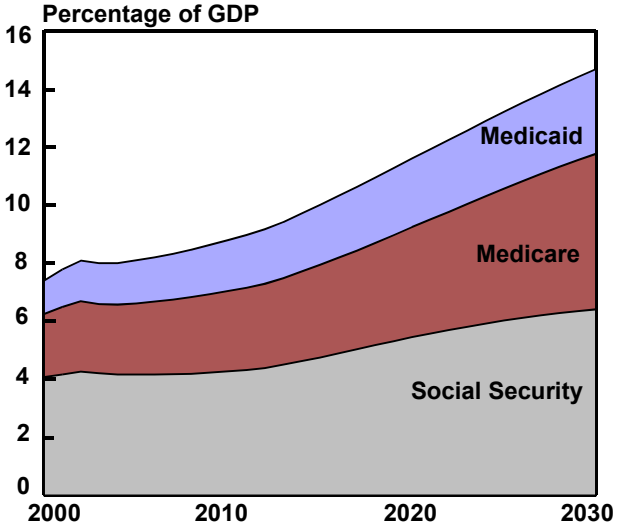
In October 2000, the Congressional Budget Office wrote about the long-term challenges to the budget and the economy posed by the aging of the baby-boom generation, increasing life spans, and rising costs in federal health programs.[1] At that time, the near-term budgetary outlook seemed very bright—CBO projected that surpluses over the coming decade would enable the government to eliminate its net indebtedness within that time span. Even in that highly optimistic environment, however, CBO projected that pressures on spending would eventually bring about a return of budget deficits and rising government debt.

Now, 15 months later, although debt held by the public is still projected to fall over the next 10 years, the near-term budgetary situation is less favorable. Furthermore, the onset of pressure for increased health and retirement spending has only drawn nearer as the baby-boom generation has moved one year closer to the time at which large numbers of them will qualify for Social Security and Medicare benefits.

This chapter describes the likely magnitude of pressures on spending over the next 30 years and the possible budgetary and economic consequences. It emphasizes measures such as total health and retirement spending and economic output, rather than the status of the Social Security and Medicare trust funds. Trust fund measures, although useful for some purposes, can be misleading. They can be changed by accounting transactions that appear to improve solvency but do not alter the government's underlying obligations or resources to pay those obligations. Moreover, they only partially reflect trends in the overall economy that are paramount in determining the government's ability to pay benefits over the longer term.

The long-term path of the federal budget will ultimately depend on the health of the economy and

Figure 6-1.
Spending for Social Security, Medicare, and Medicaid Under CBO's Midrange Assumptions



SOURCE: Congressional Budget Office.

NOTE: Spending is based on measures from the national income and product accounts. See Box 6-1 for details of CBO's midrange and other assumptions.

1. See Congressional Budget Office, *The Long-Term Budget Outlook* (October 2000).

Box 6-1.
How CBO Makes Its Long-Term Projections

The Congressional Budget Office's (CBO's) long-term projections are based on a model of the economy, the Social Security programs, and the budget.[1] The projections are not predictions of what CBO thinks is likely to happen; fiscal policies, for example, will probably change as pressure for spending on health and retirement programs increases.

Through 2010, the long-term projections flow from CBO's current 10-year baseline projections of the budget and the economy. In most of the projections, the first eight years exactly match the baseline projections. (In some of the projections, however, the use of optimistic or pessimistic population or productivity assumptions causes them to differ from the baseline over that period.) The long-term projections follow only the first eight years of the 10-year baseline projections because of the uncertainty surrounding the scheduled expiration of the tax-cut provisions in the Economic Growth and Tax Relief Reconciliation Act of 2001.

1. CBO's Long-Term Actuarial Model (LTAM) is a macroeconomic growth model with a detailed Social Security sector. That sector has been constructed to mimic the results and sensitivities of the projections of the Social Security Administration's Office of the Chief Actuary. See Congressional Budget Office, *An Economic Model for Long-Run Budget Simulations*, CBO Memorandum (July 1997), for a detailed description of the model on which the macroeconomic component of LTAM is based, and *Uncertainty in Social Security's Long-Term Finances: A Stochastic Analysis* (December 2001), Chapter One, for a description of the Social Security sector of the LTAM.

Budgetary Assumptions

In CBO's long-term projections, most categories of spending and revenues other than health and retirement programs are extended after 2010 using simple rules rather than current law. Revenues and discretionary spending are adjusted in 2011 to produce a surplus in the total budget (including the Social Security trust funds) of 2 percent of gross domestic product (GDP). From 2011 on, revenues other than payroll taxes are assumed to remain fixed as a share of the tax base. CBO does not incorporate the impact of real bracket creep—inflation-adjusted growth in income that subjects more income to higher tax rates—in its projection of revenues. Similarly, discretionary spending remains a fixed share of GDP after 2011. CBO's projections assume that spending on government transfer programs other than Social Security, Medicare, and Medicaid grows with the size and age mix of the population and with GDP per capita.

CBO projects spending and revenues for Social Security and Medicare under current law after 2010. The long-term projections of outlays for Social Security are based on forecasts by the trustees of the Social Security trust funds, adjusted for CBO's economic assumptions; projections of Medicare and Medicaid outlays are based on projected health care costs per enrollee and the number and ages of enrollees.[2]

2. The long-term projections also follow those of the Social Security trustees in assuming that Social Security benefits will continue to be paid even after the trust fund is exhausted.

on future policy decisions, which are impossible to predict. It is fairly certain, however, that health and retirement spending under current law will increase substantially over the coming decades. If current policies continued, spending on Social Security, Medicare, and Medicaid under CBO's midrange estimate would rise to 14.7 percent of gross domestic product by 2030, almost twice its current share of 7.8 percent (see Figure 6-1 on the previous page). The health programs would account for about two-thirds of that increase. Projected spending on those three programs would be substantial under a variety of alternative assumptions—for variables such as the rate of growth of productivity, the cost of health care, and the age composition and size of the population—ranging from about 13 percent to 17 percent of GDP in 2030. (See Box 6-1 for a discussion of CBO's midrange and other assumptions.)

The pressure to boost spending on health and retirement programs will present the nation with difficult choices. Some combination of reduced spending on other priorities, increased revenues, and diminished outlays for health and retirement programs (below levels projected under current law) will probably be needed to balance the government's finances.

Box 6-1.
Continued

The projections' midrange assumption is that cost growth per enrollee in Medicare in excess of real wage growth and inflation will slow from 1.7 percent to 1 percent between 2012 and 2027 and remain at that level thereafter. That assumption is similar to the intermediate assumption made by the trustees of the Medicare trust funds. In some alternative projections, CBO assumes that excess cost growth gradually climbs to 2 percent per year or falls to zero by 2027. However, the future path of health costs is extremely uncertain, and outcomes outside the range that CBO examined are plausible. All of CBO's projections assume that between 2012 and 2027, cost growth per enrollee in Medicaid gradually shifts from the rate in CBO's 10-year baseline to the long-run growth rate assumed for Medicare.

Economic Assumptions

CBO's projections assume that economic growth depends on total hours worked, the size of the capital stock, and total factor productivity (TFP). Hours of work in turn depend on the size of the population and its age mix. CBO's midrange assumption for population matches the Social Security trustees' intermediate assumption; other projections use the trustees' low-cost (optimistic) or high-cost (pessimistic) assumptions. (Mortality, immigration, and birth rates are higher under the low-cost assumption and lower under the high-cost assumption.) Budget surpluses bolster national saving, raising investment, which boosts the private capital stock. The midrange assumption is for TFP to grow at the rate assumed in CBO's baseline until 2012, after which the rate of growth will gradually rise to 1.6 percent (its average over the postwar period plus 0.2 percentage points to adjust for changes in the way prices are measured). Alternative optimistic and pessimistic assumptions raise and lower TFP growth by half a percentage point, respectively. In this analysis, the rate of productivity growth is treated as an exogenous, or independent, variable because the determinants of that growth rate are not yet well understood by economists.

CBO's projections assume that interest rates move in tandem with the return on capital (that is, the return earned on productive capital, such as plant and equipment, after corporate taxes).

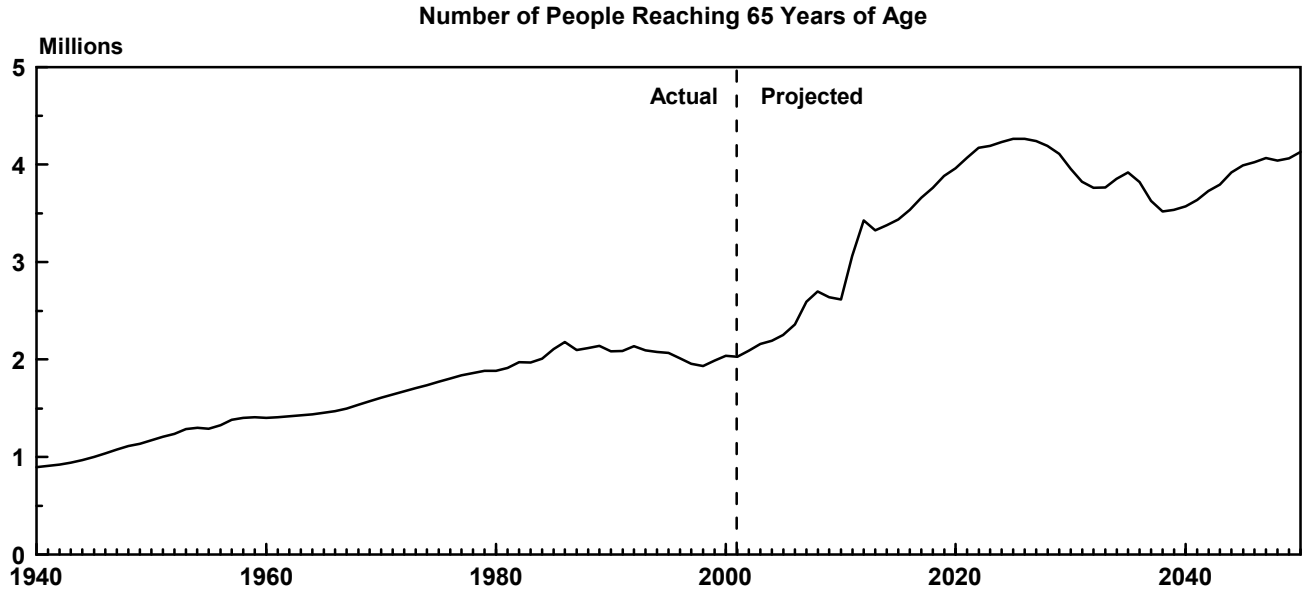
To be consistent with the economic variables in CBO's baseline, the long-term projections use the budget categories of the national income and product accounts (NIPAs). NIPA measures of spending and revenues differ from those in the budget because of differences in accounting methods and the timing of some spending.[3]

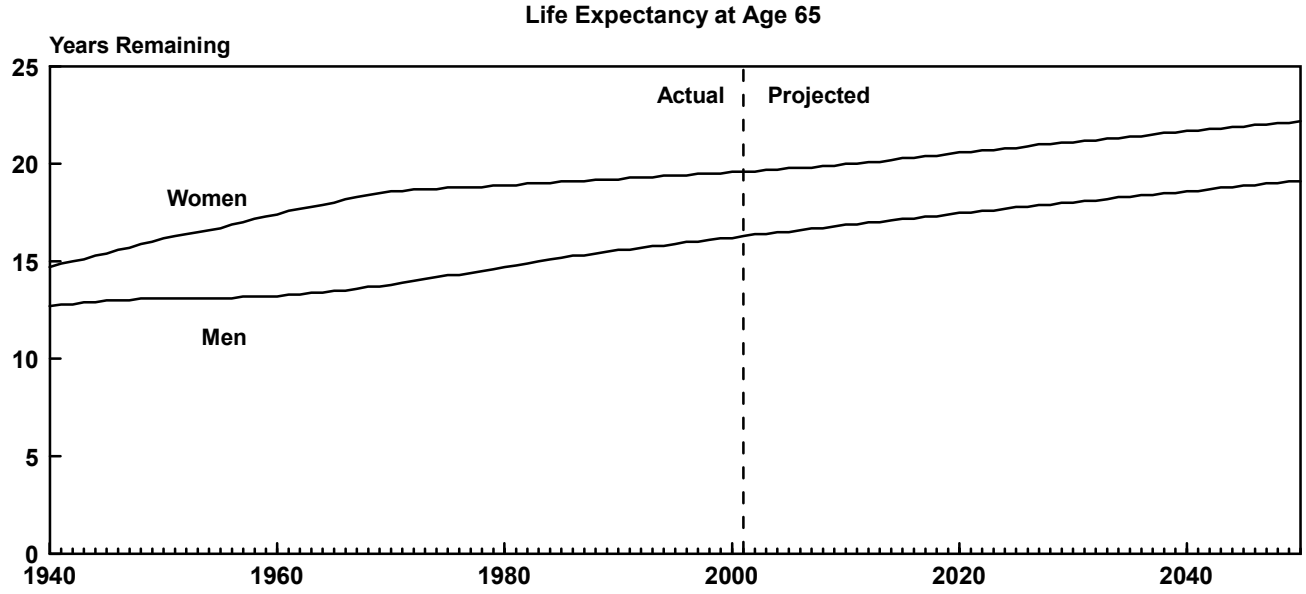
3. For a detailed description of the differences between NIPA and total budget accounting, see Appendix D, *The Federal Sector of the National Income and Product Accounts*.

Policies that encourage economic growth also could help ease the burden of rising health and retirement spending. If none of those actions is taken, rising budget deficits could ultimately harm the economy.

Taking action sooner rather than later to alleviate future budgetary pressures has several advantages. Policies that encourage economic growth may have a greater impact on future output and budgets the sooner they are implemented, simply because they can affect the economy over a longer period of time. Such policies could include running budget surpluses to bolster national saving and investment, implementing tax and regulatory policies that encourage work and saving, and orienting government spending more toward investment than toward current consumption. In addition, acting sooner would better enable lawmakers to enact policy changes that do not take effect for many years. That would give people more time to adjust their lifetime work and savings plans in response to any changes in expected benefits and taxes in programs such as Social Security, Medicare, and Medicaid. Finally, policy changes that drive down spending or push up revenues early on enable the government, because of reduced interest costs, to finance more programmatic

Figure 6-2.
Factors Affecting Long-Term Pressure on Spending for Social Security, Medicare, and Medicaid





SOURCES: Congressional Budget Office based on data from the Social Security Administration (intermediate assumptions) and from Social Security Administration, *The 2001 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (March 19, 2001), Table V.A4 (intermediate assumptions).

spending with a given level of taxes. Higher surpluses or smaller deficits today result in lower levels of debt and smaller interest payments in the future. Therefore, noninterest spending can be financed with a lower level of taxes, which can have a beneficial effect on the economy.

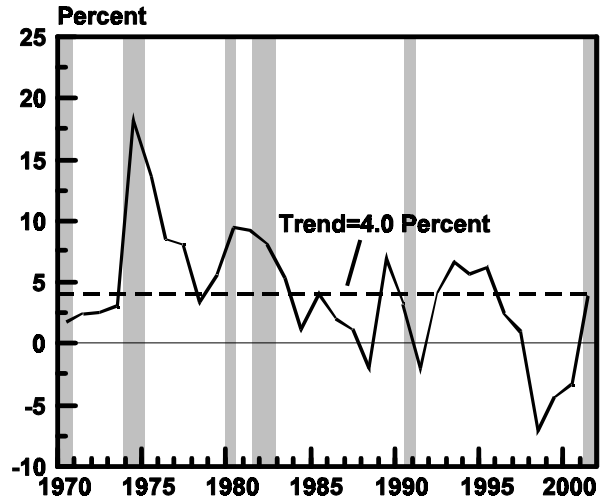
Pressures on Spending for Health and Retirement Programs

Under current law, spending on Medicare, Medicaid, and Social Security will rise significantly over the next three decades. That expected surge in spending stems from three fundamental factors. First, the large baby-boom generation will begin to reach retirement age and become eligible to receive benefits from Social Security and Medicare (see Figure 6-2). Second, people are likely to live longer than they did in the past and therefore receive health and retirement benefits over a longer time frame. Third, history suggests that advances in medical technology and increased use of medical services will probably keep pushing up the cost of providing health care (see Figure 6-3). If policymakers adopted proposals to increase Social Security, Medicare, or Medicaid benefits, spending would grow even more rapidly.

The size of projected increases in health and retirement spending is sensitive to the economic and demographic assumptions used to generate those projections. To illustrate some of those sensitivities, CBO has varied within plausible ranges the assumptions about three important but uncertain variables: cost per enrollee in federal health programs, the demographics of the U.S. population, and productivity growth (see Table 6-1).

Growth in cost per enrollee is the most difficult aspect of health care spending to project, and it is also a variable that has a powerful effect on spending as a share of GDP. Even though the wages of health care workers are an important element of the costs of federal health programs, cost per enrollee of a given age has typically grown faster than the average wage has grown (see Figure 6-3). In all of CBO's long-term projections, cost per enrollee is assumed to match the levels in CBO's 10-year baseline through 2012. Under CBO's midrange assumption, cost growth per enrollee in Medicare will gradually slow from a rate that is 1.7 percent faster than wage growth (the rate projected for 2012 in the 10-year baseline) to a rate that is 1 percent faster than wage growth between 2012 and 2027; growth will remain at that rate thereafter. Cost growth per enrollee in Medicaid is assumed to slow to the same long-run rate as in Medicare between 2012 and 2027, although it starts at a higher rate.

Figure 6-3.
Estimated Cost Growth in Excess of Wage Growth per Enrollee in Medicare (Adjusted for age mix of beneficiaries)



SOURCE: Congressional Budget Office.

Both public and private medical expenditures have tended to grow faster than the economy over the past few decades. That situation cannot continue indefinitely, however, or health spending will eventually crowd out other consumption. At some point, pressure from consumers and employers for lower health insurance premiums and less expensive medical care will probably rein in the growth of costs in the private sector—indeed, cost growth slowed substantially over the past decade. CBO's midrange assumption reflects some further slowing, but the likelihood, timing, and extent of that slowdown are extremely uncertain.

Table 6-1.
Alternative Assumptions About Health Costs, Population, and Productivity in Calendar Year 2030 (In percent)

	Assumptions		
	Optimistic	Midrange	Pessimistic
Annual Excess Growth in Health Costs per Enrollee[a]	0	1.0	2.0
Old-Age Ratio[b]	32.9	35.2	38.1
Annual Growth in Total Factor Productivity[c]	2.1	1.6	1.1

SOURCE: Congressional Budget Office.

a. Annual growth in costs per enrollee in Medicare and Medicaid in excess of real growth in wages and inflation, adjusted for the age mix of enrollees. For each alternative assumption, growth in health expenditures follows CBO's 10-year baseline projections from 2002 to 2012 and then moves to the long-run rate shown above over the next 15 years.

b. The ratio of people age 65 and over to those ages 18 to 64. The assumptions about population under CBO's optimistic, midrange, and pessimistic alternatives match the low-cost, intermediate, and high-cost population assumptions of the Social Security trustees.

c. For the midrange assumption, annual growth follows CBO's 10-year baseline projections from 2002 to 2012 and then moves to the long-run rate shown above over the next 15 years. Annual growth under the optimistic assumption is 0.5 percentage points higher, and under the pessimistic alternative 0.5 percentage points lower, than the midrange assumption in each year.

In the projections CBO made before October 2000, it assumed that cost per enrollee slowed to the level of wage growth, rather than to the current midrange assumption of 1 percent faster than wage growth, by the 25th year of the projection period.[2] Under that earlier, more optimistic assumption, spending on Social Security, Medicare, and Medicaid would rise to 14.1 percent of GDP by 2030 (see Table 6-2). In contrast, under the more pessimistic assumption that Medicare and Medicaid's cost per enrollee grows 2 percent per year faster than wages in the long run, spending on the three programs would rise to 15.4 percent of GDP by 2030. Under each of the three assumptions about cost growth, the increase in costs as a percentage of GDP is substantial.

The number of people of different ages within the population also influences the degree to which spending will rise. The Social Security trustees use three different assumptions about population in their 75-year projections: an intermediate assumption; a "high cost" assumption, which projects more elderly and fewer working-age people; and a "low cost" assumption, which projects fewer elderly and more working-age people.[3] Using the high-cost, or pessimistic, assumption, CBO projects that spending for Social Security, Medicare, and Medicaid will rise to 15.6 percent of GDP by 2030 (see Table 6-2). Even under the more optimistic low-cost assumption, CBO projects that spending will rise to 13.8 percent of GDP.

A further influence on projected spending as a share of GDP is the rate of productivity growth. Total factor productivity (TFP) is the productivity measure that CBO uses as an input in its long-term projections. Growth in TFP is the portion of economic growth that cannot be accounted for by growth in capital or labor—it is commonly thought of as a measure of technical progress. Under CBO's midrange assumption, the growth rate of TFP inches up from 1.3 percent per year in 2012 to 1.6 percent per year in 2022 and beyond (1.6 percent comprises TFP's average annual growth rate over the postwar period plus 0.2 percentage points to adjust for changes in the way prices are measured). If TFP grew by half a percentage point more in each year of the projection period—the optimistic assumption—spending on Social Security, Medicare, and Medicaid would be 14.2 percent of GDP by 2030 (see Table 6-2). If TFP grew by half a percentage point less—the pessimistic assumption—spending would rise to 15.2 percent of GDP by 2030.

Higher productivity growth means that both GDP and Social Security spending will climb, but at

2. Medicare's trustees also used a similar assumption until this year; they now use an assumption comparable to CBO's current midrange assumption.

3. The trustees' population assumptions used in CBO's projections do not incorporate information from the 2000 census, which tallied a larger current population than the trustees had assumed. Incorporating that data will probably change the trustees' population projections.

Table 6-2.
Spending for Social Security, Medicare, and Medicaid in Calendar Year 2030 Under Alternative Assumptions About Health Costs, Population, and Productivity

	Spending in 2030 (Percentage of GDP)[a]
Health Costs	
Optimistic Assumption	14.1
Pessimistic Assumption	15.4
Population	
Optimistic Assumption	13.8
Pessimistic Assumption	15.6
Productivity	
Optimistic Assumption	14.2
Pessimistic Assumption	15.2
Health Costs, Population, and Productivity Combined	
Optimistic Assumption	12.8
Pessimistic Assumption	16.9
Memorandum:	
Midrange Assumptions	14.7

SOURCE: Congressional Budget Office.

NOTE: For comparison, spending in 2001 amounted to 7.8 percent of GDP.

a. Each alternative is based on assumptions about health costs, population, and productivity (among others). In generating the first six alternatives, CBO varied only one assumption, as indicated, and held the other two at their midrange levels (see Box 6-1 for details). In the remaining two alternatives, all three assumptions are optimistic or pessimistic simultaneously.

different rates. Spending for Social Security rises when productivity increases because the program's initial benefits are based on an enrollee's history of earnings as well as average wage growth in the economy, both of which respond to changes in productivity growth. Social Security spending rises more slowly than GDP does, however, because new beneficiaries with histories of higher earnings (and therefore higher benefits) enter the system slowly, over time.

Under the assumption that health costs, population, and productivity growth combined were more favorable or less favorable than they were under CBO's midrange assumptions, the variation in projected spending would be greater. For instance, if all three variables followed their optimistic assumptions, spending for Social Security, Medicare, and Medicaid would reach 12.8 percent of GDP in 2030, still well above the current level. Pessimistic assumptions for all three variables imply that health and retirement spending would total 16.9 percent of GDP in 2030.

Those calculations offer some perspective on the likely increase in outlays over the next 30 years for Social Security, Medicare, and Medicaid under current law. Although CBO used a particular set of assumptions to generate its projections, the results would be similar under most reasonable assumptions. The bottom line is that if policies do not change, federal spending on health and retirement programs for the elderly will rise significantly as a share of the U.S. economy and the federal budget over the next 30 years.

Conclusion

The aging of the large baby-boom generation and growth in the cost of health care will dramatically increase spending for federal health and retirement programs under current law. The pressure to increase spending will present policymakers with difficult choices if they are to maintain the government's fiscal balance. Policymakers could directly reduce the rate of growth of spending for Social Security, Medicare, and Medicaid by changing those programs in ways that would reduce benefits relative to current law or provide health care more efficiently.[4] If those programs are not changed, the nation will face the prospect of steep tax increases, big cuts in other government spending, or large budget deficits.

4. For a general discussion of possible changes to Social Security, see Congressional Budget Office, *Social Security: A Primer* (September 2001). For additional examples of possible changes to both Social Security and Medicare, see Congressional Budget Office, *Long-Term Budgetary Pressures and Policy Options* (May 1998) and *Budget Options* (February 2001).